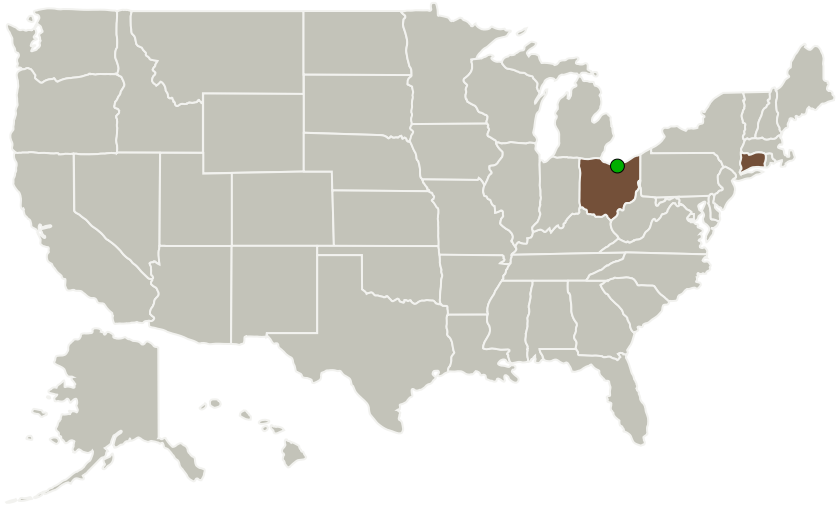
High Temperature Fiberoptic Thermal Imaging System, Phase II

Completed Technology Project (2015 - 2017)

Project Introduction

A prototype high temperature, single optical fiber thermal imaging system will be developed, tested, and delivered to GRC. The components of the instrument will be specified in detail, designed, fabricated, and purchased where appropriate. The illumination and imaging system will be assembled and system tests will be performed. Given a set of calibration images produced by the diagnostic, the image analysis needed to recover a thermal image of a surface will be developed and demonstrated. System resolution tests will be performed. The thermal imaging laboratory system will be modified to be appropriate to a prototype commercial instrument. The thermal imaging prototype will be tested and debugged at Thoughtventions and its operating characteristics defined. The thermal imaging system and operating manual will be completed and delivered and field tested at GRC for their ongoing use.

Primary U.S. Work Locations and Key Partners



Organizations Performing Work	Role	Type	Location
Thoughtventions Unlimited	Lead Organization	Industry	Glastonbury, Connecticut
Glenn Research Center(GRC)	Supporting Organization	NASA Center	Cleveland, Ohio

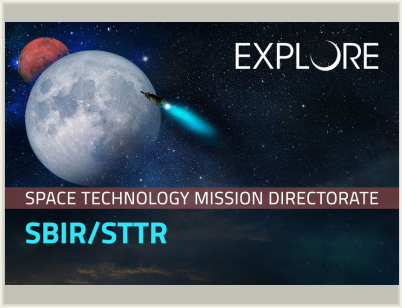


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Table of Contents

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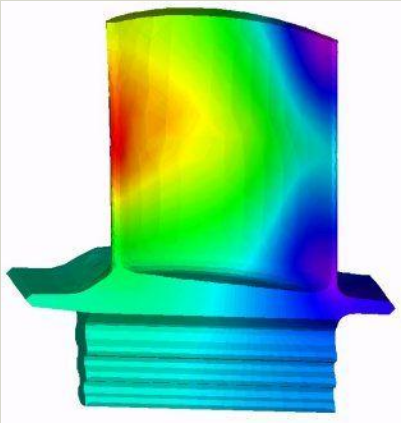
Primary U.S. Work Locations	
Connecticut	Ohio

Images



Briefing Chart
High Temperature Fiberoptic Thermal Imaging System Briefing Chart
(https://techport.nasa.gov/image/126114)

Organizational Responsibility

Responsible Mission Directorate:
Space Technology Mission Directorate (STMD)

Lead Organization:
Thoughtventions Unlimited

Responsible Program:
Small Business Innovation Research/Small Business Tech Transfer

Project Management

Program Director:
Jason L Kessler

Program Manager:
Carlos Torrez

Principal Investigator:
Stephen C Bates

Co-Investigator:
Stephen Bates

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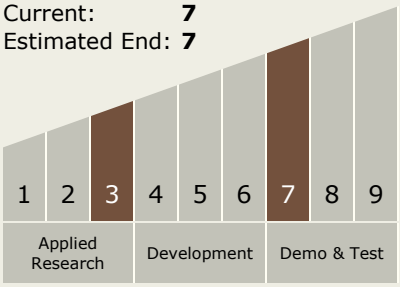
Completed Technology Project (2015 - 2017)

Technology Maturity (TRL)

Start: **3**
Current: **7**
Estimated End: **7**



Technology Areas

Primary:

- TX15 Flight Vehicle Systems
  - TX15.1 Aerosciences
    - TX15.1.8 Ground and Flight Test Technologies

Target Destinations

The Sun, Earth, The Moon, Mars, Others Inside the Solar System, Outside the Solar System